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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER	
NAUROT TON, JOAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/669,248	COFFEY, JOSEPH CHRISTOPHER	
	Examiner	Art Unit	
	Joan B. Naurot Ton	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/25/2007 and 12/02/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This first office action is in response to Application number 10/669248.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 38-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 38-45:

The claims are vague and ambiguous with respect to parent independent claim 37 and the scope of the claims cannot be ascertained as written. It is suggested that claim 38 be rewritten in independent form with claims 39-45 dependent on claim 38 in order to enhance clarity and distinctly point out the claimed subject matter in such a way that the scope of the claims can be determined.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1—9 and 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Overs et al, hereinafter referred to as Overs (US patent 6600755).

Regarding claim 1:

Overs discloses a method of selecting a data signal source from amongst a plurality of potential sources ("autonegotiation process" abstract), the method comprising: (a) selecting a source from amongst the plurality of potential sources ("a selection from at least two data rates" Claim 7, lines 26-27);

(b) monitoring the selected source for an indication of communication speed ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", Claim 7);

(d) maintaining the selection of step (a) if an indication of communication speed is observed (The process uses a lock signal before the before the link is established, abstract, and which implies the selection of the source is maintained, since the method concerns an "autonegotiation process", abstract).

(c) returning to step (a) if no indication of communication speed is observed (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources.)

Regarding claim 2:

Overs discloses the method, further comprising:

returning to step (a), selecting a source from amongst the plurality of potential sources, upon absence of a data signal from the selected source. (Column 2, lines 50-56 disclose that the operation is cyclic, thus looping back to the selection of sources.)

Regarding claims 3 and 13:

The method of claim 1, wherein the indication of communication speed is an idle signal (Overs discloses in his abstract that

idle signals are detected at various speeds).

Regarding claims 4 and 14:

Overs also discloses the method, wherein the idle signal is a normal link pulse. (Column 2, lines 49-50).

Regarding claims 5 and 15:

Overs also discloses the method, wherein the idle signal is a multi-level tier 3 pulse. (Column 2, line 47).

Regarding claim 6:

Overs discloses the method of selecting a data signal source from amongst a plurality of potential sources, the method comprising:

(a) selecting a source from amongst the plurality of potential sources ("a selection from at least two data rates" Claim 7, lines 26-27);

(b) monitoring the selected source for an indication of an ensuing autonegotiation period ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", Claim 7, and "autonegotiation process" abstract);

(c) waiting for expiration of the ensuing autonegotiation period; (Claim 7 discloses that the process needs to be completed "within a given time" for the detection of signals in the autonegotiation process, second to last paragraph, last two lines, thus implying an expiration time.)

(d) returning to step (a) if after expiration of the autonegotiation period, no indication of communication speed is observed (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources.);and

(e) maintaining the selection of step (a) if after expiration of the autonegotiation period, an indication of communication speed is observed (The process uses a lock signal before the before the link is established, abstract, and which implies the selection of the source is maintained, since the method concerns an "autonegotiation process", abstract).

Regarding claim 7:

Overs discloses the method, further comprising:

retuning to step (a), selecting a source from amongst the plurality of potential sources, upon absence of a data signal from the selected source (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources, and discloses in Column 2, lines 50-57 that whichever speed of signal is detected first "wins" in the autonegotiation process, thus implying that an absence of any signal cycles back to the selection of sources.)

Regarding claims 8 and 16:

Overs discloses the method, wherein the indication of an ensuing autonegotiation period is an idle signal (Overs discloses that during autonegotiating, Column 2, line 40, that idle link signals are searched for. Column 2, line 46).

Regarding claims 9 and 17:

Overs discloses the method, wherein the idle signal is a fast link pulse (Column 2, line 41).

Regarding claim 11:

Overs discloses a method of selecting a data signal source from amongst a plurality of potential sources, the method comprising:

(a) selecting a source from amongst the plurality of potential sources ("a selection from at least two data rates" Claim 7, lines 26-27);

(b) monitoring the selected source for an indication of communication speed or an ensuing autonegotiation period ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", Claim 7);

(c) returning to step (a) if no indication of communication speed or an ensuing autonegotiation period is observed (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources.);

(d) maintaining the selection of step (a), if an indication of communication speed is observed (The process uses a lock signal before the
before the link is established, abstract, and which implies the selection of the source is maintained, since the method concerns an "autonegotiation process", abstract.);

(e) waiting for expiration of the ensuing autonegotiation period, if an indication of an

ensuing autonegotiation period is observed (In Claim 7, the process needs to be completed "within a given time" for the detection of signals in the autonegotiation process, second to last paragraph, last two lines, thus implying an expiration time.);
(f) returning to step (a) if after expiration of the autonegotiation period, no indication of communication speed is observed (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources.); and
(g) maintaining the selection of step (a) if after expiration of the autonegotiation period, an indication of communication speed is observed (The process uses a lock signal before the before the link is established, abstract, and which implies the selection of the source is maintained, since the method concerns an "autonegotiation process", abstract.)

Regarding claim 12:

Overs discloses the method of claim 11, further comprising the following step to be carried out after either steps (d) or (g): returning to step (a) upon absence of a data signal from the selected source (Column 2, lines 50-56 discloses that the operation is cyclic, thus looping back to the selection of sources.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 37-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph in view of Medina (US patent number 6203333 B1).

Regarding claim 37:

Yoseph discloses a media converter ("media converter" P1, last line) comprising: a switch having a first end and a second end (Since the switch performs interconnect functions, P4, line 22, it has two ends, and the media converter is connected to the switch, P2, first line), the first end capable of coupling to any of a plurality of potential sources of a data signal (since copper and fiber media are disclosed on page 1, last line, a plurality of potential sources of a data signal is disclosed), the second end coupled to an input port of a physical interface that converts the data signal from a signal that propagates along a first medium to a signal that propagates along a second medium (The media converter which has an MDI interface which has an input port is capable of converting copper to fiber media as disclosed on page 1, last line, and P2, last paragraph.); and means for controlling the switch so as to couple the input port of the physical interface to one of the plurality of potential data sources actually carrying a data signal (Yoseph discloses control logic which controls the switch which is used for a plurality of signal paths. P4, line 20-24, and claim 1)

Yoseph discloses all the limitations as disclosed above except for an optical transceiver coupled to the physical interface.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter (Column 3, line 52, and abstract. Medina also

discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium.).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 38:

Yoseph discloses the network arrangement comprising: a first network device coupled via the first medium to the switch within the media converter of claim 37 (P1 last two lines, and P2, first line, discloses DTEs, switches, repeaters, and media converters which can be coupled together and involve different media, and in which there are at least two network devices connected together); and a second network device coupled via the second medium within the media converter of claim 37. (P2, line 1 discloses that the media converter can be connected to DTEs, repeaters or switches and in which a second medium, optic fiber is disclosed.)

Yoseph discloses all the limitations as disclosed above except for the optical transceiver.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter (Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium.).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter and connecting to different media is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 39:

Yoseph discloses the network arrangement, wherein the first network device comprises a switch. (P1, line 11)

Regarding claim 40:

Yoseph discloses the network arrangement, wherein the first network device comprises a hub. (P1, line 11).

Regarding claim 41:

The network arrangement of claim 38, wherein the first network device comprises a workstation. (Yoseph discloses that DTEs can be connected to other network devices, P1, last 2 lines, and one example of a DTE is a workstation.)

Regarding claim 42:

The network arrangement of claim 38, wherein the first medium is a metallic conductor. (Since Yoseph discloses media converters which convert optical media to copper media, "for example", P1, last paragraph, and P2, first line, Yoseph implicitly discloses another example such as copper to optical conversion, and in addition discloses "network interfacing devices...such as media conversion devices, P7, lines 18-20, "may be implemented at one or both ends of a link" P9, lines 15-16,)

Yoseph discloses all the limitations as disclosed above except for specifying which medium is the first medium.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter (Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter and connecting a first and second medium is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 43:

The network arrangement of claim 38, wherein the second medium is an optical fiber. (Since Yoseph discloses media converters which convert optical media to copper media, "for example", P1, last paragraph, and P2, first line, Yoseph implicitly discloses another example such as copper to optical conversion, and in addition discloses "network interfacing devices... such as media conversion devices, P7, lines 18-20, "may be implemented at one or both ends of a link" P9, lines 15-16.

Yoseph discloses all the limitations as disclosed above except for a specifying which medium is first and which is second.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter (Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission

medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 44:

The network arrangement of claim 38, wherein the first medium is an optical fiber. (Since Yoseph discloses media converters which convert optical media to copper media, "for example", P1, last paragraph, and P2, first line, Yoseph implicitly discloses another example such as copper to optical conversion, and in addition discloses "network interfacing devices...such as media conversion devices, P7, lines 18-20, "may be implemented at one or both ends of a link" P9, lines 15-16.

Yoseph discloses all the limitations as disclosed above except for specifying which medium is first.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter (Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 45:

The network arrangement of claim 38, wherein the second medium is a metallic conductor. (Since Yoseph discloses media converters which convert optical media to copper media, "for example", P1, last paragraph, and P2, first line, Yoseph implicitly discloses another example such as copper to optical conversion, and in addition discloses "network interfacing devices...such as media conversion devices, P7, lines 18-20, "may be implemented at one or both ends of a link" P9, lines 15-16.

Yoseph discloses all the limitations as disclosed above except for specifying which medium is second.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter(Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device

transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

7. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Overs in view of the IEEE standard 802.3 (2002) and Pickell (US Pub Number 2004/0153701 A1).

Regarding claims 10 and 18:

Overs discloses the method, wherein waiting for the expiration of the autonegotiation period (Overs discloses an autonegotiation process with an expiration period which is implicit as defined by the IEEE 802.3 standard. The 802.3 standard describes an aspect of autonegotiation in such a way that it is necessary to complete "the base page Auto-negotiation function in a bounded time period" Section 28.1.2 section K)

Overs discloses all the limitations as disclosed above except for waiting approximately 20 seconds.

Pickell discloses waiting approximately 20 seconds in a network communication process. ("...the interface assembly can wait a predetermined time duration, such as 15 seconds to again effect the communication link switch." Paragraph 0044, lines 12-15.)

The general concept of waiting approximately 20 seconds in a network process is well known in the art as illustrated by Pickell who discloses a waiting a predetermined amount of time, such as 15 seconds, in a communication method and system.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Overs to include the use of waiting approximately 20 seconds in his

advantageous method as taught by Pickell in order to "confirm operation" of "links" as stated by Pickell on lines 1-2, paragraph 0044.

8. Claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph in view of Overs.

Regarding claim 19:

Yoseph discloses a method for a media converter to identify which of two pairs of pins on a data jack is carrying a data signal sent from a network device, wherein the media converter includes a physical interface having an input port into which the data signal from the network device is to be supplied, and wherein the media converter further includes a switch interposed between the data jack and the physical interface, the method comprising ("network interface device...such as a media converter, P2, lines 14-15, using a "media connector" abstract, and uses a "switch 140" between the MDI and the receiver and transmitter, abstract, and "Media dependent interface" abstract, which is part of a physical interface of a network device and is inherently used for data signals, and uses an RJ45 at the each end, page1, line 14): using the switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on the data jack (Yoseph discloses an automatic crossover system which automatically selects an MDI or MDI-X interface P 3, lines 10-21 which has pairs of pins, and uses an RJ45 data jack P1 line 14 and also discloses that the "two ends toggle" P11, line 20, the control logic of the switch can "control the position of the crossover switch and set the appropriate media interface, P9, lines 1-2, and pairs of pins are disclosed since "pins 1 and 2 define one data path and pins 3 and

6 define the second" P9, lines 9-10); monitoring the pair of pins coupled to the input port of the physical interface, (page 3, lines 10-21 discusses automatic selection of an MDI or MDI-X interface, which involves "signal detection", P16, line 4); and ceasing to alternately couple the physical interface between the first pair of pins on the data jack and the second pair of pins on the data jack (since the process is for selecting and arriving at a compatible interface, P 3, lines 15-20, it is a part of the negotiation process to cease the alternating, once establishing the parameters. "If a good link is established the process is finished" P 13, line 3).

Yoseph discloses all of the limitations as disclosed above except for monitoring for an indication of the speed at which the network device will communicate and determining the communication speed.

Overs discloses monitoring for an indication of speed and detecting speed. ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", Claim 7 for an apparatus and method, Claim 7 and abstract).

The general concept of monitoring for an indication of speed and determining speed is well known in the art as illustrated by Overs who discloses data rate detection and rate determining in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring and detecting speed in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 20:

Yoseph discloses the method of claim 19, wherein the data jack is an RJ-45 data jack (P1, line 14).

Regarding claim 21:

Yoseph discloses the method, wherein monitoring the pair of pins coupled to the input port of the physical interface for an indication at which the network device will communicate comprises monitoring the pair of pins for a signal carried thereupon (P3, lines 10-21, disclose the apparatuses used in the method which has pins on it, and for which a signal is monitored, P19, lines 9-18). Yoseph discloses all the limitations as disclosed above except for monitoring for an idle signal.

Overs discloses monitoring for an idle signal and for an indication of speed in an apparatus performing autonegotiation. (Overs discloses that during autonegotiating, Column 2, line 40, that idle link signals are searched for. Column 2, line 46, and Overs discloses detecting high data rates and low data rates. Claim 7).

The general concept of monitoring for an indication of speed and monitoring idle signals is well known in the art as illustrated by Overs who discloses data rate detection and idle signal monitoring in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring idle signals and speed in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 22:

Yoseph discloses all the limitations of claim 22 except for wherein the idle signal is a normal link pulse.

Overs discloses the method, wherein the idle signal is a normal link pulse (Column 2, lines 49-50).

The general concept of monitoring a normal link pulse is well known in the art as illustrated by Overs who discloses various types of signals including normal link pulses in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring normal link pulses in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 23:

Yoseph discloses all the limitations of the method of claim 23 except for wherein the idle signal is a multi-level tier 3 pulse.

Overs discloses the method, wherein the idle signal is a multi-level tier 3 pulse. (Column 2, line 47).

The general concept of monitoring a normal link pulse is well known in the art as illustrated by Overs who discloses various types of signals including mult-level tier 3 pulses in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring multi-level tier 3 pulses in his advantageous method as taught by Overs in order to provide an "improvement to an

autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 24:

Yoseph discloses the method, further comprising:

monitoring the pair of pins coupled to the input port of the physical interface for an indication of an ensuing autonegotiation period (P3, lines 10-20 discloses automatically selecting an appropriate interface for devices in an autonegotiation method and for which the devices have pins on it to select a path P9, lines 9-10, and for which monitoring takes place, P19, lines 11-12);

waiting for expiration of the ensuing autonegotiation period, if an indication of an ensuing autonegotiation period is observed (P19, lines 10-11 discloses that if a signal is detected during the process the timer is started again, implying an expiration wait period); after expiration of the ensuing autonegotiation period, monitoring the pair of pins coupled to the input port of the physical interface for an indication at which the network device will communicate (P19, lines 14-15 disclose that after the timer expires, the process repeats or starts monitoring again); and upon determining, ceasing to alternately couple the physical interface between the first pair of pins on the data jack and the second pair of pins on the data jack. (since the process is for selecting and arriving at a compatible interface, P 3, lines 15-20, it is a part of the negotiation process to cease the alternating, once establishing the parameters. "If a good link is established the process is finished" P 13, line 3). Yoseph discloses all the limitations as disclosed above except for monitoring speed and determining speed.

Overs discloses monitoring for an indication of speed and detecting speed. ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", Claim 7, which is for an apparatus and method, Claim 7 and abstract).

The general concept of monitoring for an indication of speed and determining speed is well known in the art as illustrated by Overs who discloses data rate detection and rate determining in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring and detecting speed in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 25:

Yoseph discloses the method of claim 24,wherein monitoring the pair of pins coupled to the input port of the physical interface for an indication of an ensuing autonegotiation period comprises monitoring the pair of pins for a signal carried thereupon. (P3, lines 10-21, disclose the apparatuses used in the method which has pins on it, P9, lines 9-10, and for which a signal is monitored during an autonegotiation process P19, lines 9-18).

Yoseph discloses all the limitations as disclosed above except for monitoring for idle signals.

Overs discloses monitoring for idle signals in an autonegotiation process and apparatus. (Overs discloses that during autonegotiating, Column 2, line 40, that idle link signals are searched for).

The general concept of monitoring idle signals is well known in the art as illustrated by Overs who discloses idle signal monitoring in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring idle signals in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 26:

Yoseph discloses all the limitations of claim 26 except for wherein the idle signal is a fast link pulse.

Overs discloses the method, wherein the idle signal is a fast link pulse .

The general concept of monitoring a fast link pulse is well known in the art as illustrated by Overs who discloses various types of signals including fast link pulses in an autonegotiation process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of monitoring fast link pulses in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

9. Claims 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph in view of Overs and Medina.

Regarding claim 27:

Yoseph discloses a media converter (P2, line 15) comprising: a switch (P2, line 1) having a first end and a second end (Since a switch performs interconnecting, P4 line 22, it inherently has a first end and a second end) the first end capable of coupling to any of a plurality of potential sources of a data signal (both optic and wire media are disclosed on P1, last line, and P2, first line), the second end coupled to an input port of a physical interface that converts the data signal from a signal that propagates along a first medium to a signal that propagates along a second medium (a DTE, which can be an input port is disclosed as being connected to a media converter, P1 last two lines, and P2, first line, and also discloses converting from copper media to optic media); a logic device coupled to the physical interface ("control logic" P4, line 20 which is part of the device); wherein the logic device is arranged to cause the switch to iteratively couple its first end to each of the plurality of potential data sources on a one-by-one basis (P5 lines 8-21 disclose that the logic device controls the switch to interconnect signal paths, and since the control logic toggles the switch, it is done on a one by one basis), until instructed to cease such iterative coupling by the logic device (the control logic can also wait after the signal is detected for a period of time, implying that the iterative coupling is ceased according to the control logic. P5, lines 14-15, and "If a good link is established the process is finished" P 13, line 3); receive a signal from the physical interface, instruct the switch to cease the iterative coupling . ("If a good link is

established the process is finished" P 13, line 3, also implies that a signal was received from one of the end devices which is a physical interface.)

Yoseph discloses all the limitations as disclosed above except for the optical transceiver, the signal communicating a data rate at which the data signal will be communicated; and reception of the signal communicating the data rate at which the data signal will be communicated.

Overs teaches the signal communicating a data rate at which the data signal will be communicated; and reception of the signal communicating the data rate at which the data signal will be communicated ("detecting signals at a lower of said two data rates" Claim 7, and "detecting signals at a higher of said two data rates", and using a receiver to do this. Claim 7. Since the signals are detected at different speeds, the data rate is communicated.)

The general concept of communicating data rates and receiving them is well known in the art as illustrated by Overs who discloses a data rate communication and reception in an autonegotiating process and apparatus.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of communicating a data rate in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter(Column 3, line 52, and abstract.)

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Yoseph and Overs disclose all the limitations as

Regarding claim 28:

Yoseph discloses the media converter, wherein the logic device is further arranged to: receive a signal from the physical interface, the signal communicating that a period during which the data signal will be at least partially absent is ensuing (P4, lines 25-27); wait for the period during which the data signal will be at least partially absent to expire (a timer is used even though the data signal can be dropped for that period, P4, lines 25-27); receive a signal from the physical interface ("the control logic responds to the detection of a valid signal", P5, lines 2-3, and the "network interface device includes a receiver for receiving signals from the remote network device" P4, lines 6-7), and instruct the switch to cease the iterative coupling. (since the process is for selecting and arriving at a compatible interface, P 3, lines 15-20, it is a part of the

negotiation process to cease the alternating, once establishing the parameters. "If a good link is established the process is finished" P 13, line 3)

Yoseph discloses all the limitations as disclosed above except for the signal communicating a data rate at which the data signal will be communicated; and reception of the signal communicating the data rate at which the data signal will be communicated.

Overs teaches detection of data rates, implying that the rates are communicated, and then received by a receiver. (Claim 7)

The general concept of communicating data rates and receiving them is well known in the art as illustrated by Overs who discloses data rate detection in a communication process.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of data rate communication and reception in his advantageous method as taught by Overs in order to provide an "improvement to an autonegotiation process" as stated by Overs in his abstract, line 1.

Regarding claim 29:

Yoseph discloses the media converter of claim 28, wherein the period during which the data signal will be at least partially absent to comprises an autonegotiation period. (Yoseph discloses media converters with a switchable MDI to MDI-X interface, P2, last paragraph, and first paragraph, P3, and for which the "the network interfering device automatically selects the appropriate interface...during negotiation between the devices being interfaced" and for which the data signals associated may have

"temporary signal losses", P4, lines 15-16.)

Regarding claim 30:

Yoseph discloses the media converter of claim 27, wherein the logic device is a microprocessor. (Yoseph's control logic "can be performed by a "microprocessor based system" P10, lines 26-28)

Regarding claim 31:

Yoseph discloses the media converter of claim 27, wherein the logic device is an application specific integrated circuit. (Yoseph's control logic, which is part of the media converter, which also performs a specific set of functionalities as described by Yoseph in claim 8, lines 13-34, can comprise a "circuit constructed from discrete components" P10, lines 26-27.)

Regarding claim 32:

Yoseph discloses the media converter of claim 27, wherein the first medium comprises a metallic conduction path.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter(Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 33:

The media converter of claim 27, wherein the second medium comprises an optical fiber.

Medina teaches using an optical transceiver in a media connector, which works connected to a media converter(Column 3, line 52, and abstract. Medina discloses that his network arrangement has the ability for "interfacing with a copper transmission medium". Column 5, line 55, and in his abstract, lines 1 and 2, Medina discloses "converting data signals from a first transmission medium to a second transmission medium, and since he discloses it in such a way that allows for either to be first or second, all arrangements are disclosed).

The general concept of providing an optical transceiver coupled with a physical interface to be used within a media converter is well known in the art as illustrated by

Medina who discloses an optical transceiver to be used with a method and apparatus which converts signals from one medium to another (abstract).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph to include the use of an optical transceiver in his media converter as taught by Medina in order to "convert data signals from a host device transmission medium to the second medium", as stated by Medina in his abstract, last three lines.

Regarding claim 34:

The media converter of claim 27 wherein the first medium comprises an optical fiber. (Yoseph discloses media converters which convert optical media to copper media, P1, last paragraph, and P2, first line.

Regarding claim 35:

The media converter of claim 27 wherein the second medium comprises a metallic conduction path. (Yoseph discloses media converters which convert optical media to copper media, P1, last paragraph, and P2, first line.)

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph, Overs and Medina, as applied to claim 27, in view of Nagase et al, hereinafter referred to as Nagase. (US pub number 2002/0130650)

Regarding claim 36:

Overs and Yoseph disclose all the limitations as disclosed in claim 36 except for communicating a two-bit digital signal derived from a tri-state signal.

Nagase teaches two bit digital signals derived from a tri state signal. ("The output logic circuit is of a tri state signal, that is, a logic high, a logic low, and a high impedance state." Nagase discloses that two switches with a logic high comprise a high impedance state, and the two bit signals are implicitly described. Paragraph 0077, entire paragraph.)

The general concept of communicating a two bit signal derived from a tri state signal is well known in the art as illustrated by Nagase who discloses two bit signals derived from a tri state signal.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoseph and Overs to include the use of a two bit signal derived from a tri state signal in his advantageous method as taught by Nagase in order to provide for "generating control signals on the basis of input signals" as stated by Nagase in paragraph 4, lines 6-7.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joan B. Naurot Ton whose telephone number is 571-270-1595. The examiner can normally be reached on M-Th 9 to 6:30 (flex sched) and alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JBNT

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NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100